

# REPORT ON BOILERS.

No. 14774.

Port of Glasgow

TUES. 10 JUL 1906

Received at London Office.

No. in Reg. Book.

Survey held at

Glasgow

Date, first Survey

28<sup>th</sup> Oct. 1905

Last Survey

21<sup>st</sup> June 1906

(Number of Visits 49)

on the

TWIN SCREW STEAMER NILE.

Tons } Gross 6694.35  
Net 4179.07

Master Martin Built at Glasgow By whom built Caird & Co. Ltd. When built 1906  
Engines made at Glasgow By whom made Caird & Co. Ltd. when made 1906  
Boilers made at Glasgow By whom made Caird & Co. Ltd. when made 1906  
Registered Horse Power Owners Pennine & Oriental S.S. Co. Ltd. Port belonging to Glasgow

MULTITUBULAR BOILERS—~~MAIN~~, AUXILIARY ~~OR DONKEY~~.—Manufacturers of Steel D. Colville & Sons.

(Letter for record S.) Total Heating Surface of Boilers 2298.0 sq. ft. Is forced draft fitted No. No. and Description of

Boilers 1: Cylindrical boiler Simple End. Working Pressure 215 lb Tested by hydraulic pressure to 420 lb Date of test 11/5/06

No. of Certificate 440 Can each boiler be worked separately Yes. Area of fire grate in each boiler 5-8-4 ft<sup>2</sup> No. and Description of

safety valves to each boiler 2: Direct Spring. Area of each valve 4.9 in<sup>2</sup> Pressure to which they are adjusted 220 lb

Are they fitted with easing gear Yes. In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes and bunkers or woodwork About 15 in. Mean dia. of boilers 14.8 in. Length 11.6 in.

Material of shell plates Steel Thickness 1 1/2 in. Range of tensile strength 30-33 tons Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams Double Lap Long. seams Double Lap Diameter of rivet holes in long. seams 1 7/8 in. Pitch of rivets 10 1/2 in. 5 1/2 in.

Lap of plates or width of butt straps 22 3/4 in. Per centages of strength of longitudinal joint rivets 94.4 Working pressure of shell by plate 84.4

rules 268 lb Size of manhole in shell 16 in x 12 in Size of compensating ring 28 in x 1 1/2 in. No. and Description of Furnaces in each

boiler 3: Morrison's. Material Steel Outside diameter 45 3/4 in. Length of plain part 8 ft. Thickness of plates crown 2 1/2 in. bottom 3 1/2 in.

Description of longitudinal joint Weld. No. of strengthening rings None. Working pressure of furnace by the rules 233 lb Combustion chamber

plates: Material Steel Thickness: Sides 5 in. Back 5 in. Top 3 1/2 in. Bottom 2 1/2 in. Pitch of stays to ditto: Sides 4 1/2 x 7 1/2 Back 4 1/2 x 8

Top 4 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 217 lb Material of stays Steel Diameter at

smallest part 1 1/2 in. Area supported by each stay 63 in<sup>2</sup> Working pressure by rules 245 lb End plates in steam space: Material Steel Thickness 1 1/4 in.

Pitch of stays 14 x 15 1/4 How are stays secured Double Nuts & Washers. Working pressure by rules 282 lb Material of stays Steel Diameter at smallest part 2 1/2 in.

Area supported by each stay 268 lb Working pressure by rules 248 lb Material of Front plates at bottom Steel Thickness 1 3/8 in. Material of

Lower back plate Steel Thickness 1 1/8 in. Greatest pitch of stays 12 in. Working pressure of plate by rules 218 lb Diameter of tubes 3 in.

Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1 1/4 in. Back 3/4 in. Mean pitch of stays 8 1/2 in. Pitch across wide

water spaces 14 in. Working pressures by rules 292 lb 282 lb Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 10 1/2 x 1 1/2 Length as per rule 32 in. Distance apart 8 1/2 in. Number and pitch of Stays in each 3: 8 in.

Working pressure by rules 258 lb Superheater or Steam chest: None connected to boiler None. Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER—No. None Description Manufacturers of steel

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can

enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile

strength Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets Working pressure of shell by rules Thickness of shell crown plates

Radius of do. No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace

Thickness of furnace plates Description of joint Working pressure of furnace by rules Thickness of furnace crown

plates Stayed by Diameter of uptake Thickness of uptake plates Thickness of water tubes

The foregoing is a correct description,  
FOR CAIRD AND COMPANY, LIMITED,  
Manufacturer.

Dates of Survey while building  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

SECRETARY

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " " " "

W1541-0135



**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

*This Boiler has been constructed under special survey and the materials and workmanship are good.*

*For recommendations as to class, see first sheet.*

Certificate (if required) to be sent to

The amount of Entry Fee...	£	:	:	When applied for,
Special ... ..	£	:	:	19
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

*Glasgow - 9 JUL 1906*

Committee's Minute

Assigned

*See accompanying report.*

*Wm. Austin.*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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Foundation